



Pfc. Gweep
at radio school

ARMY AIR FORCES
TRAINING COMMAND
SIOUX FALLS S.D.



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ARMY AIR FORCES TRAINING COMMAND

TO YOU:

Now receiving and transmitting messages in a Flying Fortress over the Pacific . . . and, you, unerringly firing guns at a Focke-Wulf from a Liberator over Germany . . . and, you, carefully taking a bearing in a Billy Mitchell Bomber over the fog laden Aleutians, this book is dedicated.

You were the pioneer students of this Radio School. You marched to classes in knee-deep mud . . . you learned code above the din of hammers and saws as work went on unfinished school buildings . . . you mastered the mechanics of radio despite a woeful lack of proper equipment.

You had a right to gripe . . . and you did. But you also became real soldiers and fine radio men. You left an ever present challenge of outstanding military accomplishment to the soldiers who follow you in this school.

F. A. Robinson

STORY AND ILLUSTRATIONS
by CPL. VICTOR M. TURNER



This is **Pfc. GWEEP**. He's just arrived at the Army Air Forces Training Command Radio School at Sioux Falls to learn radio in twenty weeks. He's an average Air Corps rookie, with some basic training, a good I.Q. and probably no experience with radio other than listening to one. Right now his mind is dwelling only on the more or less surprising distance this spot is from home. To him his future is hazy, but let's see if we can't rush the course of events a bit and find out what's in store for him.

The Army Air Forces Radio School at Sioux Falls was opened in the summer of 1942. The first class started its studies on July 6, 1942 and was graduated November 6, 1942. Since then a new class has graduated every six days. At first, classes were held in barracks, while the school buildings were under construction.

Almost immediately GWEEP
is interviewed at the school
classification office.



This office, while it in itself, has not the authority to reassign a man to another school, endeavors to weed out anyone not capable of being a good radio man, for either physical or mental reasons. It also turns away any man who, within the past year, has graduated from an AAF Technical school, particularly, Armorer's, Aircraft Mechanic's, or Radio School. Also those who have not completed their basic training are ear-marked here for that training.



Soon after that, **GWEEP** is assigned to a class and experiences the first sensation of acute bewilderment on trying to copy a four-word check ~

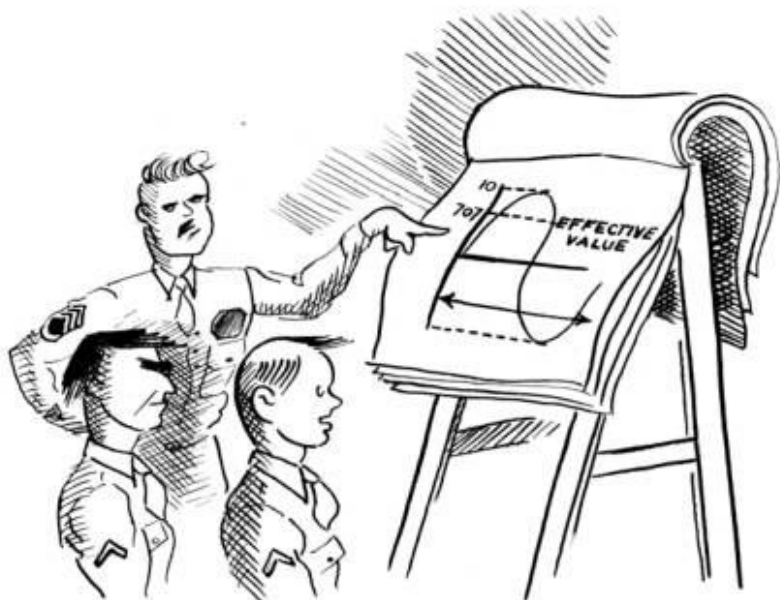
In September of 1942 the classes moved into the big new school buildings. In the barracks they had taken code from a loudspeaker, but here they found individual headsets hooked to any speed the student was capable of taking.



He shuttles back and forth between Code and Theory. His first few moments in D.C. bring him in contact with a command set. This is interesting, he thinks, as he begins to feel his proximity to actual aircraft communications.



In D. C. the new student is given electrical fundamentals, such as Ohm's law, series and parallel circuits, the theory of electrons, etc.



The first week passes in no time. Electrical terms are not as strange now as the second phase is begun. The heretofore blank meanings of "AC" and "DC" begin to take on an understandable (or at least nearly so) aspect. Coils and resistors are becoming part of his daily life~

This course is concerned with the difference between D. C. and A. C. current. All work is done with students participating, and the strange new radio terms are brought in gradually by the instructors.

Rectifiers, amplifiers, duo-diodes, pentodes, pulsating D.C. The third week finds **GWEED** in "circuit components." He now has learned the names of most of the parts that go into a radio and their relation to each other, but their functions are still a little vague.



"Bread - boards" are used extensively to illustrate different circuits. This enables a student to see the actual components in operation without the confusion presented by the wiring in an actual radio.

WE REMOVE THE IRON CORE AND THE
LIGHT BULB GOES ON: WHY?



Fourth week and **GWEEP**
goes up before "The Quiz Kids."
He's wishing he'd studied a
bit more~

The "Quiz Kids" is the
droll term applied to the exami-
nation given at the end of four
weeks to check a man's prog-
ress. If his response to the quiz
is bad enough, he'll wash back
to D. C. again.



AAFTC
SIOUX FALLS, S.D.

Dear Mom, I took the "Quiz
Kids" test and I think I did
O.K., but it wasn't too easy.
I'm doing well in code,
having just passed ten words.
Getting a good code speed is
important if I want to get into
a flying crew. I sure hope I
can do that, but I still have
fourteen weeks to go in school.

The fifth, sixth, seventh and eighth weeks are spent in Receivers and Transmitters where all the loose ends of knowledge gained in the first four weeks are applied to complete radios constructed by the students.

Here we find the men constructing receivers and transmitters from the parts in specially designed kits for this purpose. This is in sharp contrast to the early days of the school, when radio parts were collected from the local citizenry.

WHAT ARE YOU WORKING
SO HARD FOR, SUCKER?
LOOK AT ME, I GOT
PAST THE QUIZ KIDS
WITHOUT STRAINING
MYSELF

YEAH, BUT THERE
ARE MORE TESTS TO
COME THAT MAY BE A
LITTLE TOUGHER.



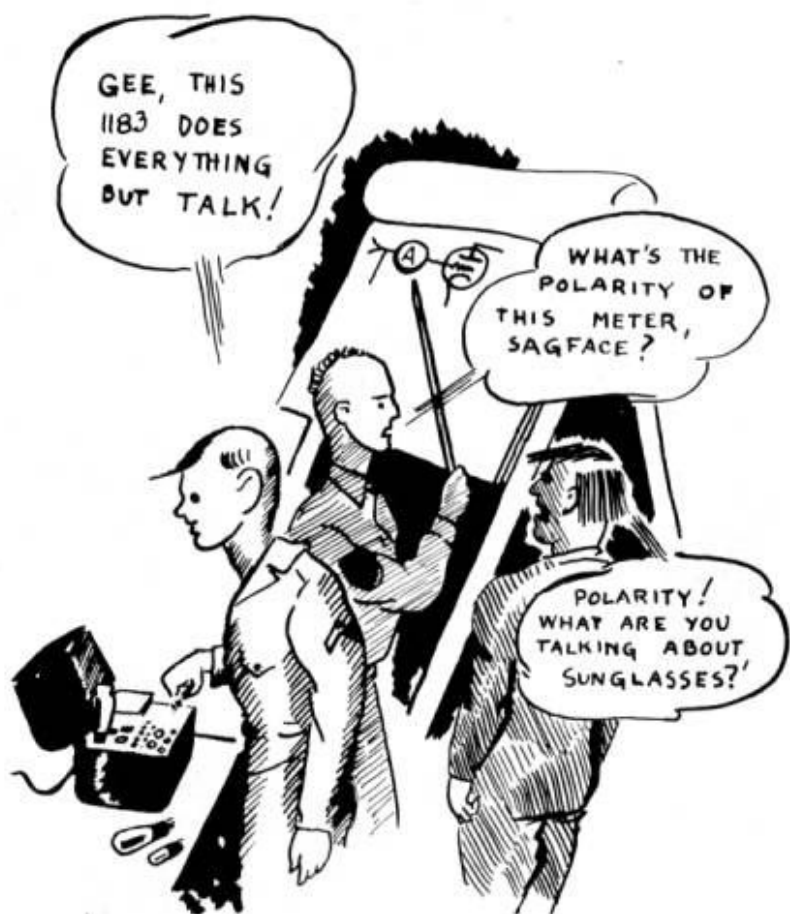
GWEEP is right. A
tougher test does come.
He does pretty well on
this one, but the goof-off,
Sagface, just barely gets
by~



The
8th Week
Quiz Kids~

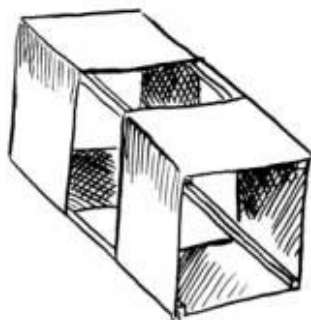


The required code speed for graduation of a student as a qualified Radio-Operator-Mechanic is sixteen words per minute, but higher speeds are strongly encouraged.



Ninth week and they enter AREB to learn about the actual Air Force radio equipment.

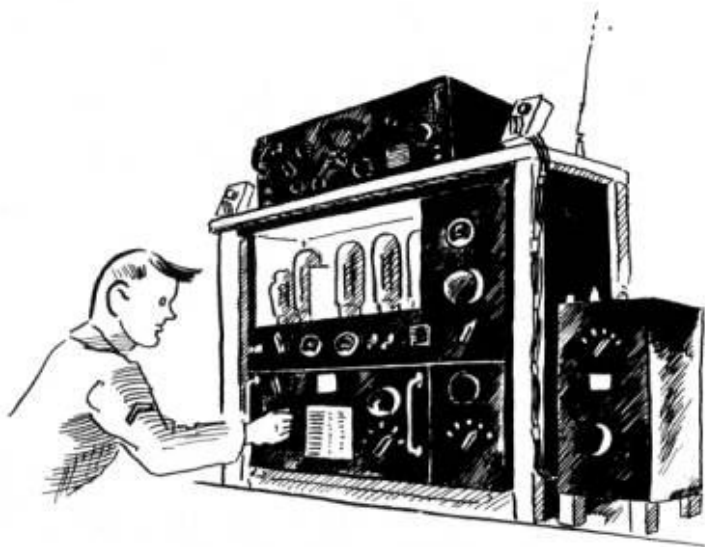
AREB stands for Aircraft Radio Equipment Branch. Here are taken up the long and short range, high and low frequency sets that are used in combat aircraft. Heretofore the students have studied only the fundamentals of radio, and the low-priced construction kits.



The days slip by in ever-increasing interest now, as the tenth week covers the 283 command set; the eleventh, the 274N command set. Here they find the "Gibson Girl," (SCR 578), the now famous emergency unit.



The above named radios are typical low power sets used in plane-to-plane and plane-to-ground communications. The "Gibson Girl" (so called from the hour-glass shape) can be used in life rafts, etc. to summon help. This little yellow radio has saved many lives and may help you some day.



**Now for the big stuff—
In the twelfth week the
Liaison High Power
Transmitter and Receiver
are taken up. This is the
big brother of all U.S.A.F.
aircraft radios—**

The Liaison Set is the 1000
volt long range radio (receiver and
transmitter) sometimes known as
"The Radio Operator's Set" be-
cause it is only found in the larger
aircraft carrying an R. O.

The thirteenth week we find
our class in Navigational
procedure ~

THIS PIECE OF GLASS, HERE,
REPRESENTS THE 75 MEGACYCLE
SIGNAL COVERING THE "CONE OF
SILENCE" OVER THE AIRPORT.



Here is instructed sufficient
knowledge of bearing shooting, map
reading, etc. needed by the R. O.
should he be required to use his
equipment to guide the plane's
course as well as for communication.



Also in the thirteenth week their code class changes a bit. Now they start on "Tactical Procedure," the rules and etiquette of communicating in code.

Communications in code require a complicated system of addresses and construction of messages, priorities, abbreviated signals, etc. to enable several stations to operate on the same frequency in an orderly fashion.

The fourteenth week and we find the most fascinating set of them all, the Radio Compass. This is a vitally important unit to know, as this can easily mean the difference between victory or disaster for a plane and its mission.



Proper knowledge of this set is vital. It cannot be emphasized too strongly that an R. O. must very often "bring the plane home" with this compass. Many gallant crews and valuable aircraft have been lost through the ignorance of the radio man.



Then the 522, the Ultra-High Frequency set, until recently a closely guarded secret—

The "pipsqueak" is a note transmitted by this set as an identifying signal, cautioning anti-aircraft gunners that the plane is friendly. This was extremely valuable to the British in the critical days when their skies were a constant maze of aircraft locked in combat.

The last two weeks of radio mechanics are spent in G.M. (General Maintenance) I and II, during which time all the equipment thus far taken up is reviewed, dismantled, reconstructed, rewired, etc. etc. In G.M. II the much talked of tuning check is given. All the sets must be tuned correctly from memory.



HOW ABOUT THAT? THOSE DIRTY
SO AND SO'S WASHED ME BACK TEN
WEEKS BECAUSE I FLUNKED MY
TUNING CHECK! HOW CAN A GUY
BE EXPECTED TO KNOW ALL ABOUT
THOSE SETS LIKE THAT? AS IF
I AIN'T WORKED HARD ENOUGH AS
IT IS! BLAH - BLAH - * @!!





But **Pfc. GWEEP** doesn't wash back. He goes on to the most enjoyable two weeks of the course. The towers, the mobile units, the field training unit, are all covered in a manner simulating actual line conditions.



And finally, graduation ~



Yes, graduation is over, the twenty weeks are done, and a shiny new patch is on Pfc. **GWEEP'S** sleeve.

But now what?

Where does a Sioux Falls graduate go when he's finished the course? Are there many good opportunities for him?

You can bet your G.I. boots there are!

Let's have a look at some of them: ~~~~~

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**He may immediately step into the advanced course on mechanics of the 522, the U.H.F. set~**

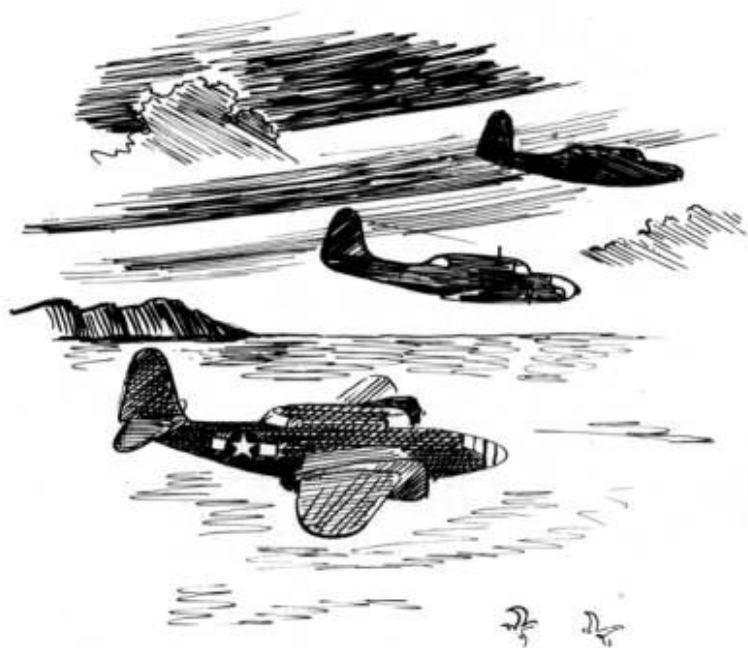
For this he must have at least eighty per cent in theory, credit for not more than 16 w. p. m. and be classified as "General Duty" i. e., not eligible for combat crew training, but not limited service. He may not be previously assigned.



The most popular deal is  
to be a flying R.O.-Gunner.  
For anyone in top physical  
condition, this is the job—

The requirements for  
gunnery school are six feet  
or under in height, 180  
pounds or less in weight, age  
eighteen to thirty-five and  
eyes 20/40 uncorrected. He  
may not be previously as-  
signed.





## Or he can make the Ferry Command ~

—where the physical requirements  
aren't so strict.





## He may become a communications cadet~

For this he must be in the upper 20 per cent of his class scholastically, qualified for active service, eighteen to thirty-eight years of age, be passed by a board of officers and can be either previously assigned or unassigned.

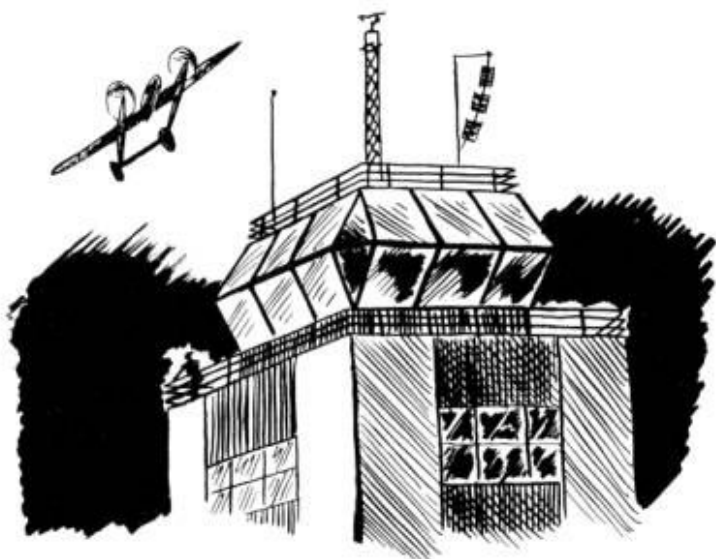






He may go to Radio  
Locator School —

For R. L. he needs a  
good scholastic record. Be  
classified "General Duty"  
and not previously assigned.



He may go to C.T.O. (Control Tower Operator) school —

For this he needs a good ROM record but not credit for more than 16 w. p. m. Classified as "General Duty" and have 20/20 eyes, pass a color blindness test and be unassigned.





## Then there's advanced R.O. school —

Requirements here are:  
Above average in code, below  
80 per cent in theory, have a  
minimum of six weeks pre-  
training, be classified as "Gen-  
eral Duty" and not previously  
assigned.



## Or advanced R.M. School~

For this he needs 80 per cent or above in theory, a failing grade in the R. O. course, a "General Duty" classification, be either assigned or unassigned and have at least four to seven weeks pre-training.



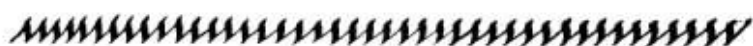
**Or GWEEP** may become an instructor in some phase here in school—

Here he must be in the upper 10 per cent of his class, passed by a board of officers, and unassigned. He may be limited service.

Of course, you have a pretty  
good idea how Saqface will  
end up —







We hope this little book has been of some help in giving you an idea of what you are going to do on this post and your prospects on graduation from school. This period in your military career is primarily concerned with teaching you radio. But while attending classes you are still a soldier and must remember your obligations as such. To the people of Sioux Falls you represent the Air Corps. Upholding its honor and traditions is your job now. Pertinent to this job are a few rules as follow ~

DON'T ~





~walk with your  
hands in your  
pockets~



~walk in more than two's on the  
street~



~walk on the wrong side of the  
street~

~ gamble on  
the post ~



~ bring liquor on  
the post ~



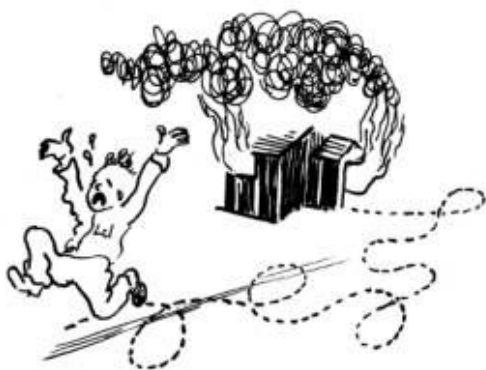
CHOW!

~ forget your military courtesy  
and discipline ~



~live in a dirty barracks~

~forget where the firebox is~



~forget what to do in case of fire~

~ talk  
while in  
ranks ~



~ talk military  
subjects when  
you leave  
the post ~



~ break from a formation ~

~be in improper uniform or have  
your coat unbuttoned ~





